

**Amendments to the specification,  
Clean version of the replacement paragraph(s)/section(s), pursuant to 37  
CFR 1.121(b)(1)(ii):**

*Please replace the Abstract paragraph beginning at page 55, line 3, with the following rewritten paragraph:*

A Boolean Network rule engine for evaluation of rules is described that comprises: a rules interface for receiving a set of rules, each rule having at least one condition; a network builder for building a Boolean Network representation of the set of rules including transducers linked by logic gates, each transducer generating a Boolean value based on evaluating an item of input data against a condition of a rule; and a runtime evaluation engine for receiving input data, detecting changed items of input data, activating links among transducers and logic gates of the Boolean Network representation based on the changed items of input data so as to utilize transducers and logic gates of the Boolean Network representation relevant to rule evaluation outcome, evaluating rules based on the input data and active transducers and logic gates and returning results of rule evaluation.